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## ABSTRACT -

The purpose of this study was to develop a psychometric evaluation technique which could be used to efficiently assess individual features of addiction treatment subjects which bear upon success of treatment. Previous administration of personality measures in two addiction treatment programs had revealed that successful and unsuccessful treatment subjects varied significantly on selected items of several evaluation instruments. Subjects prone to drop out of the programs prematurely were found to be more variable on these items than subjects whose attendance in the programs was stable. The findings held true for both a methadone maintenance program and a hypnotic-simulation therapy program, and the investigators concluded that the items formed a valid measure of addiction treatment subject characteristics which could be used to type subjects according to stability and hence, need for intensified supportive counseling. (Author)



Development of an Instrument for Assessing
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Problemmatical to the successful rehabilitation of persons addicted to narcotics is the identification of individual characteristics of patients which affect the probable success of the patients in the program, and which indicate that specialized programs are needed to successfully rehabilitate those persons. In most rehabilitation programs, individualized psychiatric evaluation is impractical, and questionnaires are of limited utility in assessing the needs of the individual subject. In fact, use of such questionnaires often leads to the conclusion that alcoholics, drug addicts, incalcitrant persons, and dropouts from these programs all look alike (Bloom, Sudderth, 1970). Such a conclusion is incompatible with the construction of differentiated treatment programs based on the assessment of individual psychological, sociological and physiological differences and/or needs.

This study was made in order to develop a psychological instrument which could be used to differentiate addiction rehabilitation patients according to factors which affect their success in rehabilitation programs. Such an instrument was developed, providing a means of contrasting potentially successful and potentially unsuccessful rehabilitation subjects.

## METHOD

The instrument was developed through studies conducted at two addiction rehabilitation programs. The first program was a methadone maintenance project conducted in Hawaii by the John Howard Association and the Hawaii Department of Health. The second program was conducted at the California Institute for Women and utilized self-hypnosis and hallucination of heroin effects as a treatment mode. In the Hawaii program, subjects' scores on personality and mood instruments revealed differences in stability of successful and unsuccessful rehabilitation patients. In the California program, items found in the earlier study to be particularly sensitive to variability were also found to differentiate patients who were successful in carrying out the self-hypnosis treatment from those who were not.

Five personality inventories were administered to the subjects prior to their initiation into both programs. MMPI (Minnesota Multiphasic Personality Inventory), CMS (Clyde Mood Scale), MAACL (Multiple Affective Adjective Check List), TMA (Taylor Manifest Anxiety) and ESD (Edwards Social Desirability).

Analysis of the group responses to the instruments revealed that the methadone group as a whole was normal, with some exceptions. The Clyde scale revealed that the group was somewhat less aggressive and happier than the norms, the MAACL indicated average anxiety and degression, but much greater hostility than normal, and the THA and ESD revealed average anxiety, while the ESD revealed a less-than-normal degree of social desirability. The exceptions should be considered in light of the anxiety-re-



ducing effect of methadone and the conditions of the program which could result in a certain amount of hostility: repeated testing, urinalysis and daily dispensing of methadone.

To evaluate possible short-term personality and/or mood changes, the CMS, MACL, TMA and ESD were administered at weekly intervals while the subject were in both rehabilitation programs. Analysis of the individual subject's responses to the weekly administrations of the instruments revealed mood fluctuations of the individuals which provided a means of differentiating the individuals in the program. The instruments made it possible to differentiate individuals who responded over time in a psychologically stable fashion from those who responded in an unstable fashion.

For example of the above, Table 1 shows the contrasting degree of variability in the responses of a successful and an unsuccessful subject on eight particularly sensitive items which were adopted for use in the sixty item instrument. Subject #25 in the program had test responses which revealed variability in mood. He was inconsistent in his cooperation with program workers and eventually dropped out of the treatment. Subject #28 responded to the test instruments in a stable fashion and has been consistently cooperative in the program.

All of the subjects' responses were analyzed to isolate those items which were found to be most reliable in revealing variability in the subjects, and which would enable the program workers to discover which subjects were stable and suitable for less guided treatment and which ones were unstable and needed more individualized support and counselling.

A group of sixty items in the battery of test instruments

were found to be sensitive to variability while the majority of the items were found to be highly stable for test subjects.

Some of these items were in the form of individual adjectives, as the instruments in which they appeared were adjective check lists (Clyde Mcod Scale and Multiple Affective Adjective Check List), while some of the items were of sentence form.

To further test the sensitivity of items to variability, the sixty items were administered in the second addiction treatment program under study. At the California Institution for Women, a group of addict convicts were selected for a program in which subjects were administered treatment to heighten their susceptibility to hypnosis, and then were taught to hypnotize themselves and hallucinate a heroin effect while in their self-induced trance. To heighten hyprotic susceptibility, anectine, a drug producing a temporary paralyzing effect, was administered. The drug causes a short period in which the subject is unable to breathe, and the subject thus experiences an interval of intense fear. During this heightened emotional state, most subjects are highly susceptible to hypnosis, and can be trained to go into a hypnotic trance upon a signal. This signal was later used by the psychiatrist to achieve a quick hypnosis of the subjects during which they were trained to hall cinate the effect of heroin. Once the subjects were able to hypnotize themselves, many were able to achieve this hallucination and 'hus "satisfy" their addiction without using the actual drug.

The sensitive items of adjective form were administered to the subjects of the CIW program to monitor their emotional stability could be realted to their success on the program and to further validate the appropriate use of the items. The results of the

testing indicated that those suljects who tested as unstable according to the items found variable for the Hawaii methadone subjects were unable to achieve the self-induced hallucination sought in the California program. Conversely, those subjects who were successful in hallucinating the drug were found to be generally stable by the criteria of the Hawaii administrations of the items. For all the subjects unable to hallucinate drug effects, the deviation over the sensitive items was higher than the deviation for the hallucinating group. The average item deviation for non-hallucinators was .6693, while the average deviation for the nallucinators was .42235, significant at the .05 level.

## CONC JUSION

The sensitive items so lected were demonstrated to be effective in revealing variability which affects the success of subjects in narcotics-addiction rehabilitation programs. It was concluded that these items could be the initial basis of a test which could be used to monitor the stability and potential success of rehabilitation subjects.

Further refinement of these items to give greater differentiation to successful and unsuccessful subjects can be based on findings of Haertzen, Hill and Belleville (1963), who discovered that sentence completion tests in objectively revealing subject response. To accommodate this response mode, the investigators scanned large bodies of sentence form test items to locate those containing the variable and stable adjectives. The Minnesota Multiphasic Personality Inventory and the 550 item Addiction Research Center Inventory developed at the Lexington,

Kentucky Addiction Research Center, have both been used in many studies of addicts and thus provided the sentences for the comparison with the sensitive items.

This search yielded a body of 30 sentence-form items which contained adjectives which had proven to be sensitive to variability in the rehabilitation of patients.

To form a sentence-completion test, the key adjectives were deleted from their context items. The result is a list of incomplete sentences which require the test subject to supply term related to the concept contained in the variability-sensitive adjectives. As 30 items of the original 30 were not contained in the MMPI or the ARCI, it is suggested that these items measure mood or personality dimensions related to treatment success which are beyond the scope of those two inventories. The development of meaningful sentence completion items from those 30 is eing done clinically.

eral a vantages for admin stration to subjects in addiction-re-habilitation programs. It is short and is designed specifically to test for the variability which has been shown to be related to remobilitation success. The short length makes it feasible to administer the test weekly, thus providing program workers a means of menitoring the stability, over time, of program patients. This menitoring function should result in the effective deployment of intensified or individualized treatment procedures to individual patients in the program.

TABLE I

Most Variable Items: Initial Response

Item (Adjective)	Initial Response		Variability		
	Person #25	Person #28	Ave. Person	Person #25	Person #28
efficient dependable	a little	quite* quite a little*	38 .35 .31	1.5	0 0 .37
fatigued downhearted	quite quite	not at all**	30	1.5	0
considerate beautiful unhappy alert independent dizzy forceful	quite a little quite a little quite a little a little a little	quite a little not at all** a little quite not at all** a little	.32 .20 .30 .40 .49 .22	1.25 1.25 1.25 1.25 1.25 1.25 1.25	0 .10 .10 .16 .47 .05
good-natured	qu te	quite	.33	1.0	0
daring friendly warm hearted shaky sociable polite	a little a ittle qu te a little a little a little	a little quite* quite quite not at all** quite* quite*	.40 .34 .38 .27 .41	1.0 1.0 1.0 1.0 1.0	.05 0 0 0 .05